

Abstract of the Disclosure:

Integrated circuits with charge pumps are frequently used for supplying integrated circuits, in particular memory circuits, with energy. When the input voltages are low, at about 2V or less, the required operating voltage may be less than the required 2.5V or 3.3V. In that case it is no longer ensured that the integrated circuit will operate reliably. A two-stage charge pump is thus provided, in which the second stage is connected with its capacitor in parallel with the first stage. The parallel circuit allows the ratio of the two capacitances to be determined largely freely as a function of predetermined parameters, such as the current, the voltage and the required area. Furthermore, this also has the advantage over a series circuit that, when the two capacitances are connected in parallel, they are added linearly, so that the capacitance size can be defined largely independently and freely.

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